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| Mr. Michael T. Davis  Pre-Calculus | | Units 3.1 3.2 3.3 Practice Quiz  February 27, 2017 | |
| Name: | |

Unit 3.1

Simplify each expression. Give each answer without negative exponents.

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Unit 3.2

1. 

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| x | Y |
| - 3 |  |
| - 2 |  |
| - 1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

2. 

|  |  |
| --- | --- |
| x | Y |
| - 3 |  |
| - 2 |  |
| - 1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

3.3

1. Micailah deposited $1,500 in an interest-bearing savings account for eight years. The annual interest rate is 3.5%, and the interest is compounded weekly. What will be the future value of her investment at the end of the eight-year investment period?
2. Aasia deposited $3,500 in an interest-bearing savings account for twelve years. The annual interest rate is 4.8%, and the interest is compounded one at the end of each year. What will be the future value of her investment at the end of the twelve-year investment period?
3. Kyler deposited $550 in an interest-bearing savings account for six years. The annual interest rate is 5.4%, and the interest is compounded monthly. What will be the future value of her investment at the end of the six-year investment period?
4. Tyrica deposited $250 in an interest-bearing savings account for seventeen years. The annual interest rate is 6.7%, and the interest is compounded continuously. What will be the future value of her investment at the end of the seventeen-year investment period?
5. Devin deposited $2,100 in an interest-bearing savings account for thirty years. The annual interest rate is 2.75%, and the interest is compounded daily. What will be the future value of the investment at the end of the thirty-year investment period?
6. Immanuel has 580 mg of radium-226, a radioactive isotope, with a half-life of 1,600 years. How many grams of the isotope will be radioactive after 450 years have passed?
7. Zachary has 89 mg of tianium-44, a radioactive isotope, with a half-life of 63 years. How many grams of the isotope will be radioactive after 97 years have passed?
8. Sophie deposits $500 in an interest-bearing savings account. Over the years, she observes that her money doubles in value every 11 years. What is the value of her investment after 9 years?
9. Sarah deposits $1,450 in an interest-bearing savings account. Over the years, she observes that her money doubles in value every 14 years. What is the value of her investment after 32 years?